

## P/N: 89203-0101

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### Document identity

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### Website

<http://www.flir.com>

### Customer support

<http://support.flir.com>

### Disclaimer

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Imaging and optical data	
Infrared resolution	640 × 480 pixels
UltraMax (super-resolution) <sup>1</sup>	Yes
NETD	<30 mK @ +30°C (+86°F)
Field of view	42° × 32°
Minimum focus distance	0.15 m (0.49 ft.)
Minimum focus distance with MSX	0.65 m (2.13 ft.)
Focal length	10 mm (0.39 in.)
Spatial resolution (IFOV)	1.2 mrad/pixel
Available extra lenses	<ul style="list-style-type: none"> <li>• 24° (AutoCal)</li> <li>• 14° (AutoCal)</li> <li>• 6° (service calibration required)</li> </ul>
Lens identification	Automatic
f number	1.1
Image frequency	30 Hz
Focus	<ul style="list-style-type: none"> <li>• Continuous LDM</li> <li>• One-shot LDM</li> <li>• One-shot contrast</li> <li>• Manual</li> </ul>
Field of view match	Yes
Digital zoom	1–8× continuous
Detector data	
Focal plane array/spectral range	Uncooled microbolometer/7.5–14 μm
Detector pitch	12 μm
Image presentation	
Resolution (display)	640 × 480 pixels (VGA)
Surface brightness (cd/m <sup>2</sup> )	400
Screen size	4 in.

1. Not supported when using macro.



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<b>Image presentation</b>	
Viewing angle	80°
Color depth (bits)	24
Aspect ratio	4:3
Auto-rotation	Yes
Touchscreen	Optically bonded PCAP
Display technology	IPS
Cover glass material	Dragontrail®
Programmable buttons	2
Viewfinder	Yes
Image adjustment	<ul style="list-style-type: none"> <li>• Automatic</li> <li>• Automatic maximum</li> <li>• Automatic minimum</li> <li>• Manual</li> </ul>

<b>Image presentation modes</b>	
Infrared image	Yes
Visual image	Yes
MSX	Yes
Picture in picture	Resizable and movable
Gallery	Yes

<b>Measurement</b>		
Camera temperature range	Object temperature range	Accuracy — for ambient temperature 15 to 35°C (59 to 95°F)
-20 to 120°C (-4 to 248°F)	-20 to 100°C (-4 to 212°F)	±2°C (±3.6°F)
	100 to 120°C (212 to 248°F)	±2%
0 to 650°C (32 to 1202°F)	0 to 100°C (32 to 212°F)	±2°C (±3.6°F)
	100 to 650°C (212 to 1202°F)	±2%
300 to 2000°C (572 to 3632°F) <sup>2</sup>	300 to 2000°C (572 to 3632°F) <sup>2</sup>	±2%

<b>Measurement analysis</b>	
Spotmeter	3 in live mode
Area	3 in live mode
Automatic hot/cold detection	Automatic maximum/minimum markers within area
Measurement presets	<ul style="list-style-type: none"> <li>• No measurements</li> <li>• Center spot</li> <li>• Hot spot</li> <li>• Cold spot</li> <li>• User preset 1</li> <li>• User preset 2</li> </ul>
Difference temperature	Yes
Reference temperature	Yes
Emissivity correction	Yes, variable from 0.01 to 1.0 or selected from materials list
Measurement corrections	Yes

2. For 42° lens; 300 to 1800°C.

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<b>Measurement analysis</b>	
External optics/windows correction	Yes
Screening	0.5°C (0.9°F) accuracy at 37°C (98.6°F) with reference
<b>Alarm</b>	
Color alarm (isotherm)	<ul style="list-style-type: none"> <li>• Above</li> <li>• Below</li> <li>• Interval</li> <li>• Condensation (moisture/humidity/dewpoint)</li> <li>• Insulation</li> </ul>
Measurement function alarm	Audible/visual alarms (above/below) on any selected measurement function
<b>Set-up</b>	
Color palettes	<ul style="list-style-type: none"> <li>• Iron</li> <li>• Gray</li> <li>• Rainbow</li> <li>• Arctic</li> <li>• Lava</li> <li>• Rainbow HC</li> </ul>
Setup commands	Local adaptation of units, language, date, and time formats
Languages	21
<b>Service functions</b>	
Camera software update	Using USB cable or SD card
<b>Storage of images</b>	
Storage media	Removable memory: SD card
Time lapse (Periodic image storage)	10 seconds to 24 hours (infrared)
Remote control operation	Using USB cable or Wi-Fi
Image file format	Standard JPEG, measurement data included. Infrared-only mode.
<b>Image annotations</b>	
Voice	60 seconds with built-in microphone and speaker (and via Bluetooth) on still images and video
Text	Text from predefined list or soft keyboard on touchscreen
Visual image annotation	Yes
Image sketch	Yes: on infrared only
Sketch	From touchscreen
METERLiNK	Wireless connection (Bluetooth) to: FLIR meters with METERLiNK
Laser distance meter information	Yes
Area measurement information	Yes
GPS	Location data automatically added to every still image and first frame in video from built-in GPS
<b>Video recording in camera</b>	
Radiometric infrared-video recording	RTRR (.csq)
Non-radiometric infrared-video recording	H.264 to memory card
Visual video recording	H.264 to memory card

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<b>Video streaming</b>	
Radiometric infrared-video streaming (compressed)	Over UVC
Non-radiometric video streaming (compressed: IR, MSX, visual, Picture in Picture)	<ul style="list-style-type: none"> <li>• H.264 (AVC) over RTSP (Wi-Fi)</li> <li>• MPEG4 over RTSP (Wi-Fi)</li> <li>• MJPEG over UVC and RTSP (Wi-Fi)</li> </ul>
Visual video streaming	Yes
<b>Digital camera</b>	
Resolution	5 MP with LED light
Focus	Fixed
Field of view	53° x 41°
Video lamp	Built-in LED light
<b>Laser pointer</b>	
Laser alignment	Position is automatically displayed on the infrared image
Laser distance meter	Activated by dedicated button
Laser	Class 2, 0.05–40 m (0.16–131 ft.) ±1% of measured distance
<b>Data communication interfaces</b>	
Interfaces	USB 2.0, Bluetooth, Wi-Fi, DisplayPort
METERLiNK/Bluetooth	Communication with headset and external sensors
Wi-Fi	Peer to peer (ad hoc) or infrastructure (network)
Audio	Microphone and speaker for voice annotation of images
USB	USB Type-C: data transfer/video/power
USB standard	USB 2.0 High Speed
Video out	DisplayPort
Video connector type	DisplayPort over USB Type-C
<b>Radio</b>	
Operating frequency	Bluetooth + EDR/LE: 2402–2480 MHz WLAN 2.4 GHz: 2412–2462 MHz WLAN 5 GHz: 5150–5350 MHz (DFS: only slave mode) Note that frequency band 5150–5350 MHz is for indoor use only, see national regulations.
RF output (EIRP)	Bluetooth + EDR/LE: < 10 dBm WLAN: < 17 dBm
Antenna	Integrated PIFA antenna (gain: maximum 1.4 dBi)
<b>Power system</b>	
Battery type	Rechargeable Li-ion battery
Battery voltage	3.6 V
Battery operating time	> 4 hours at 25°C (77°F) with typical use
Charging system	In camera (AC adapter or 12 V from a vehicle) or two-bay charger
Charging time (using two-bay charger)	3.5 h to 90% capacity, on-screen indicator



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<b>Power system</b>	
Charging temperature	0°C to +45°C (+32°F to +113°F), except for the Korean market: +10°C to +45°C (+50°F to +113°F)
External power operation	AC adapter 90–260 V AC (50/60 Hz) or 12 V from a vehicle (cable with standard plug, optional)
Power management	Automatic shut-down and sleep mode
<b>Environmental data</b>	
Operating temperature range	–15 to +50°C (5–122°F)
Storage temperature range	–40 to +70°C (–40 to 158°F)
Humidity (operating and storage)	IEC 60068-2-30/24 hours, 95% relative humidity, 25–40°C (77–104°F)/2 cycles
EMC	<ul style="list-style-type: none"> <li>• ETSI EN 301 489-1 (radio)</li> <li>• ETSI EN 301 489-17</li> <li>• EN 61000-6-2 (immunity)</li> <li>• EN 61000-6-3 (emission)</li> <li>• FCC 47 CFR Part 15 Class B (emission)</li> </ul>
Radio spectrum	<ul style="list-style-type: none"> <li>• ETSI EN 300 228</li> <li>• FCC Part 15.249</li> <li>• RSS-247 Issue 2</li> </ul>
Encapsulation	IP 54 (IEC 60529)
Shock	25g (IEC 60068-2-27)
Vibration	2g (IEC 60068-2-6)
Safety	EN/UL/CSA/PSE 60950-1
<b>Physical data</b>	
Weight (including battery)	1.4 kg (3.1 lb.)
Size (L × W × H)	<ul style="list-style-type: none"> <li>• Lens vertical: 164.3 × 201.3 × 84.1 mm (6.5 × 7.9 × 3.3 in.)</li> <li>• Lens horizontal: 164.3 × 201.3 × 167.3 mm (6.5 × 7.9 × 6.6 in.)</li> </ul>
Battery weight	195 g (6.89 oz.)
Battery size (L × W × H)	59 × 66 × 94 mm (2.3 × 2.6 × 3.7 in.)
Tripod mounting	UNC ¼"-20
Housing material	PCABS with TPE, magnesium
Color	Black
<b>Warranty and service</b>	
Warranty	<a href="http://www.flir.com/warranty/">http://www.flir.com/warranty/</a>

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Shipping information	
Packaging, type	Cardboard box
Packaging, contents	<ul style="list-style-type: none"> <li>• Accessory box I:               <ul style="list-style-type: none"> <li>◦ Power supply for battery charger</li> <li>◦ Power supply, 15 W/3 A</li> <li>◦ Printed documentation</li> <li>◦ SD card (8 GB)</li> <li>◦ USB 2.0 A to USB Type-C cable</li> <li>◦ USB Type-C to HDMI and PD adapter</li> <li>◦ USB Type-C to USB Type-C cable (USB 2.0 standard)</li> </ul> </li> <li>• Accessory box II:               <ul style="list-style-type: none"> <li>◦ Lens cap strap</li> <li>◦ Lens cleaning cloth</li> <li>◦ Neck strap</li> <li>◦ Small eyecup</li> </ul> </li> <li>• Battery (2 ea)</li> <li>• Battery charger</li> <li>• FLIR Thermal Studio Pro license card (1 year subscription)</li> <li>• Hard transport case</li> <li>• Infrared camera with lens</li> <li>• Lens cap, front</li> <li>• Lens cap, front and rear (only for extra lenses)</li> </ul>
Packaging, weight	5.9 kg (13.0 lb.)
Packaging, size	500 × 190 × 370 mm (19.7 × 7.5 × 14.6 in.)
EAN-13	7332558025123
UPC-12	845188020873
Country of origin	Sweden

### Supplies & accessories:

- T199300ACC; Battery
- T199610; Battery charger
- T199347ACC; Hard transport case for FLIR T8xx, T5xx, and GF7x series
- T300030; Option, No radio
- T130531ACC; Large eyecup
- T300188; Hand strap and neck strap
- T199609; Option, Macro mode 50/71/101 μm for 24°
- T850105; FLIR Inspection Route - Camera Option
- T130337ACC; Calibration target
- T199588; IR lens, f=29 mm (14°) with case
- T199589; IR lens, f=17 mm (24°) with case
- T199590; IR lens, f=10 mm (42°) with case
- T300095; IR lens, f=70 mm (6°) with case
- T911630ACC; Power supply for camera, 15 W/3 A
- T911631ACC; USB 2.0 A to USB Type-C cable, 0.9 m
- T911633ACC; Power supply for battery charger
- T911705ACC; USB Type-C to USB Type-C cable (USB 2.0 standard), 1.0 m
- T911706ACC; Car adapter 12 V
- T911845ACC; USB Type-C to HDMI and PD adapter
- T911846ACC; USB 2.0 A to USB Type-C with Power supply
- T198495; Pouch
- T197771ACC; Bluetooth Headset
- T300244; FLIR Route Creator Plugin for FLIR Thermal Studio Pro, 1 Year Subscription
- T300243; FLIR Thermal Studio Pro, 1 Year Subscription
- T300083; FLIR Thermal Studio Pro, Perpetual license
- T300258; FLIR Thermal Studio, Perpetual license



## FLIR T860 42°

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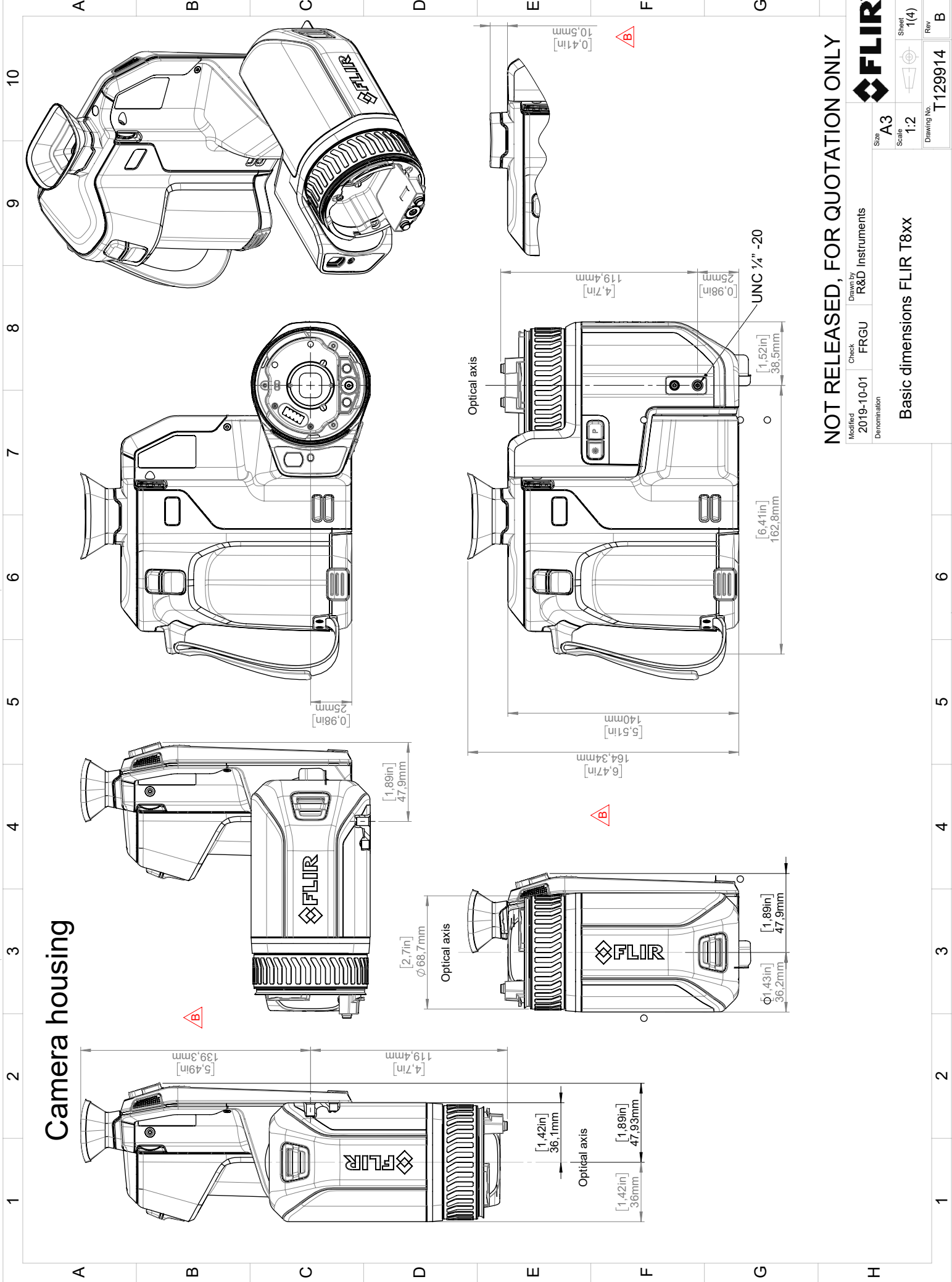
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- T198583; FLIR Tools+ (download card incl. license key)
- T198696; FLIR ResearchIR Max 4 (hardware sec. dev.)
- T199013; FLIR ResearchIR Max 4 (printed license key)
- T199043; FLIR ResearchIR Max 4 Upgrade (printed license key)
- INST-EW-0155; Extended Warranty 1 Year for A3xxf, T540, T600/bx, T610, T840, T860
- INST-EWGM-0165; Premium Service Package for T540, T600/bx, T610, T840, T860
- INST-GM-0150; General Maintenance Package for T540, T6xx, T840, T860

# Camera housing



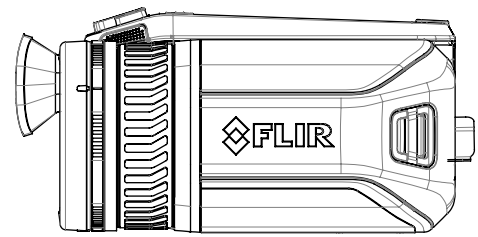
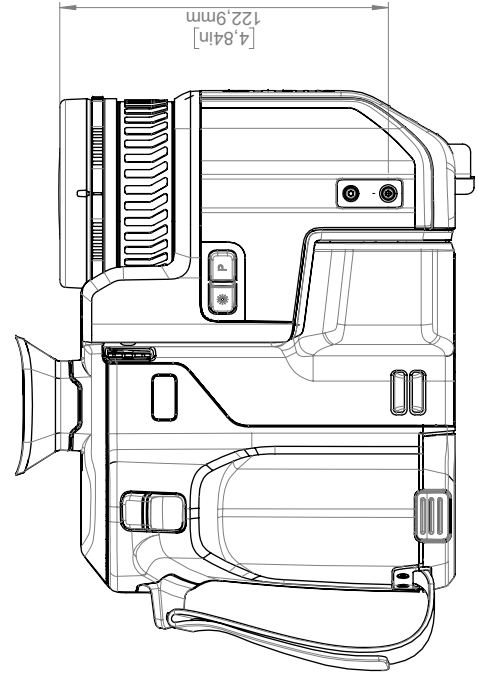
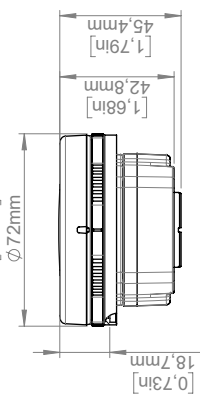
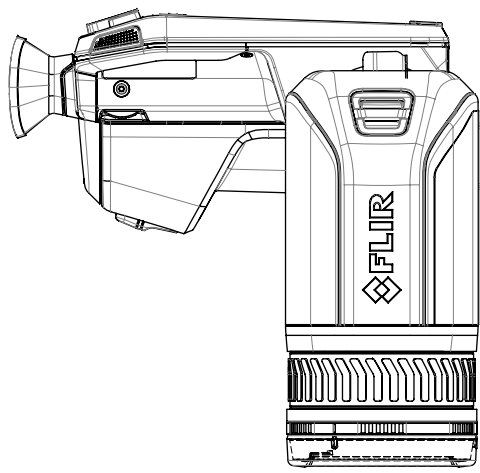
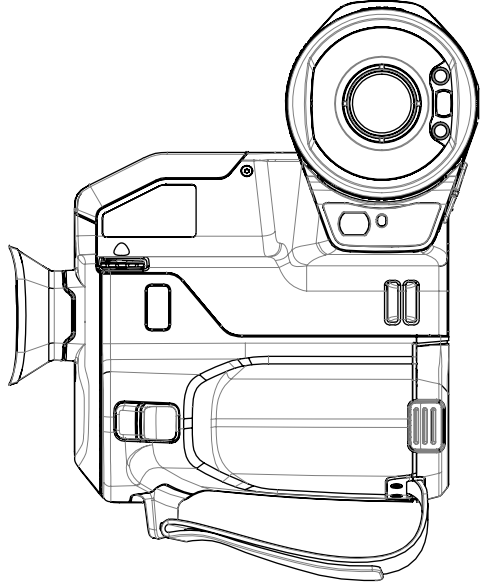
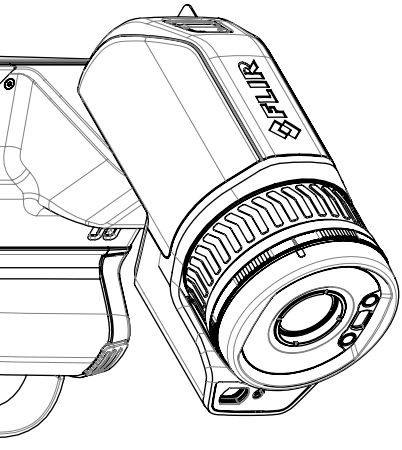
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Modified	2019-10-01	Check	FRGU	Drawn by	R&D Instruments	Size	A3	Sheet	1(4)	
Denomination				Scale	1:2	Rev	T129914			
Basic dimensions FLIR T8xx										



Camera with Lens IR f=10mm (42°)  
 Camera with Lens IR f=17mm (24°)  
 Camera with Lens IR f=29mm (14°)



[4.84in] 122.9mm

For additional dimensions see page 1

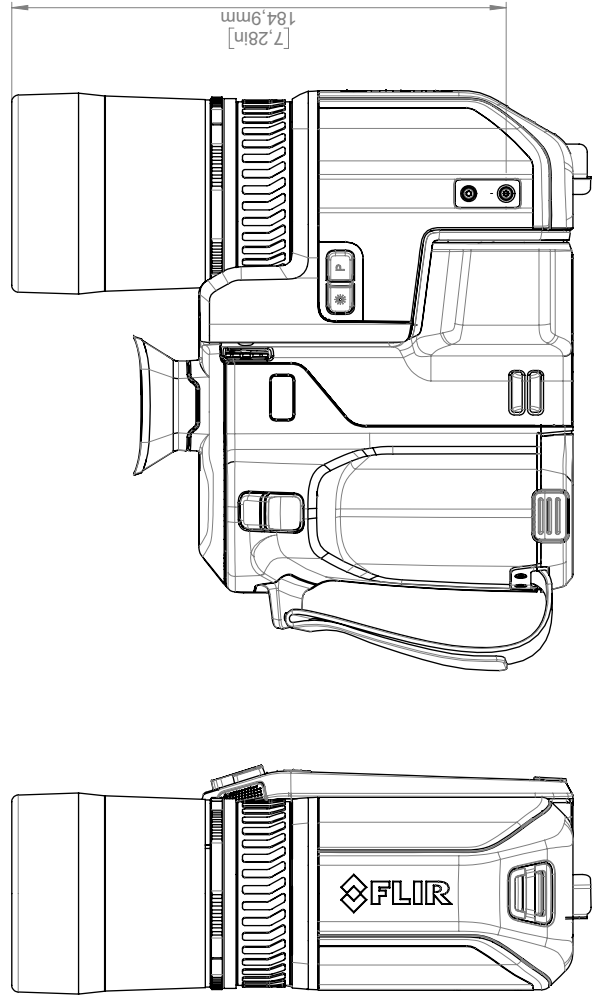
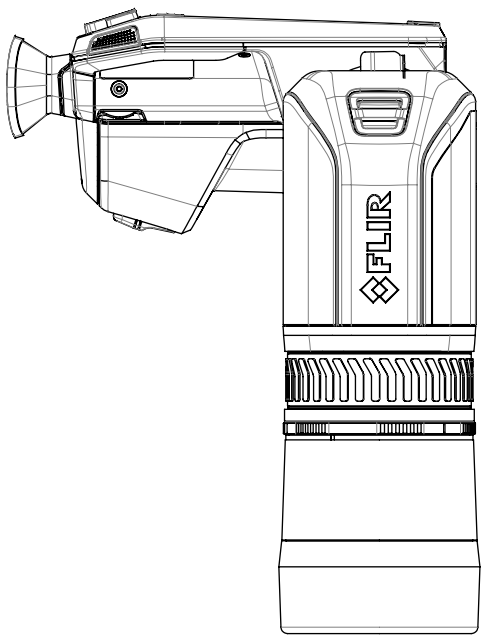
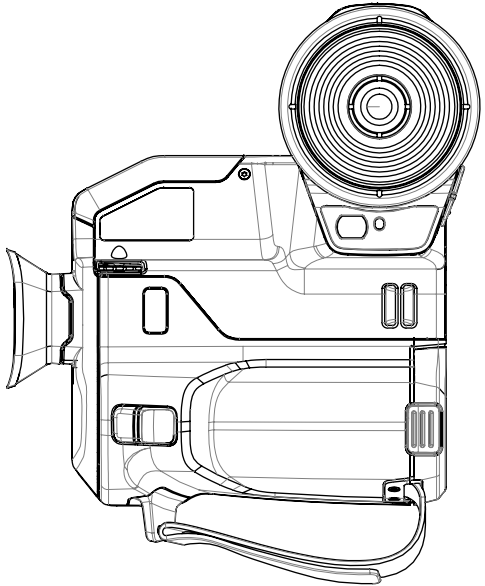
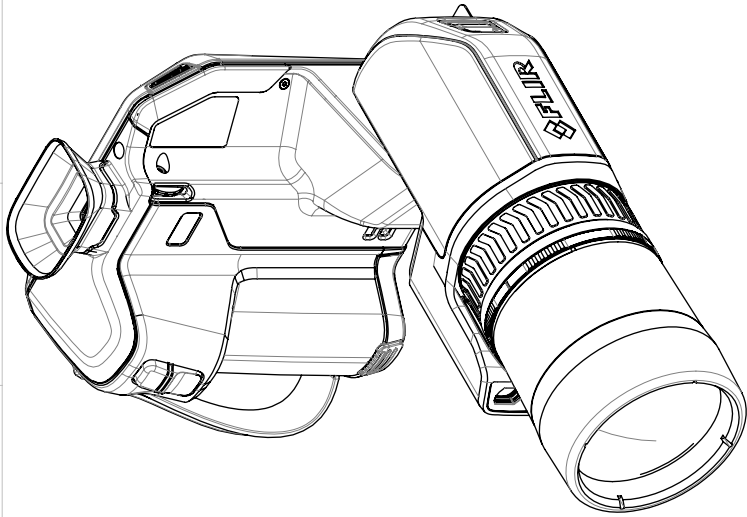
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Modified 2019-10-01	Check FRGU	Drawn by R&D Instruments	Size A3	Sheet Z(4)
Denomination Basic dimensions FLIR T8xx			Scale 1:5	Rev T129914



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# Camera with Lens IR f=70mm (6°)



For additional dimensions see page 1

<b>NOT RELEASED, FOR QUOTATION ONLY</b>		Size	A3
Modified	2019-10-01	Check	FRGU
Drawn by	R&D Instruments	Scale	1:5
Denomination	Basic dimensions FLIR T8xx	Sheet	3(4)
		Drawing No.	T129914
		Rev	B



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February 2, 2019 Täby, Sweden

AQ320246

**CE Declaration of Conformity – EU Declaration of Conformity**

Product: FLIR T5XX-, T8XX- and GF7X-series  
 Name and address of the manufacturer:  
 FLIR Systems AB  
 PO Box 7376  
 SE-187 15 Täby, Sweden

This declaration of conformity is issued under the sole responsibility of the manufacturer.  
 The object of the declaration: FLIR T5XX-, T8XX- and GF7X-series (Product Model Name FLIR-T8210).  
 The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

**Directives:**

Directive	2012/19/EU	Waste electrical and electric equipment
Directive	2014/53/EU	Radio Equipment Directive (RED)
Directive	1999/519/EC	Limitation of exposure to electromagnetic fields (SAR)
Directive	2011/65/EU	RoHS and 2015/830/EU

**Standards:**

EMC Radio:	ETSI EN 301 489-1 + -17	EMC for radio, broadband data transmission
Emission:	EN 61000-6-3/A1:2011	EMC – Generic standards
Immunity:	EN 61000-6-2:2005	Electromagnetic Compability Generic
	EN 301489-1:2016 v2.1.0	ERM – EMC for radio equipment
	EN 301489-17:2012 v2.2.1	ERM – EMC Wideband data
Laser:	EN 60825-1	Safety of laser products
Radio:	ETSI EN 300 328 v2.1.1	Harmonized EN covering essential requirements of the R&TTE Directive
	ETSI EN 301 893 v.2.1.1	5GHz WLAN
	EN 303 413 v1.1.0	Radio Spectrum Efficiency (gps)
SAR:	EN 50566:2013/AC:2014	Handheld and body mounted wireless
Safety:	EN 62209-02:2010	Handheld and body mounted wireless
	IEC 60950-1:2005+A1:2009+	Information technology equipment
	A2:2013 EN 60950-1:2006+	
RoHS:	A11:2009+AC:2011+A12:2011	
	EN 50581:2012	Technical documentation

**FLIR Systems AB**  
 Quality Assurance



Lea Dabiri  
 Quality Manager